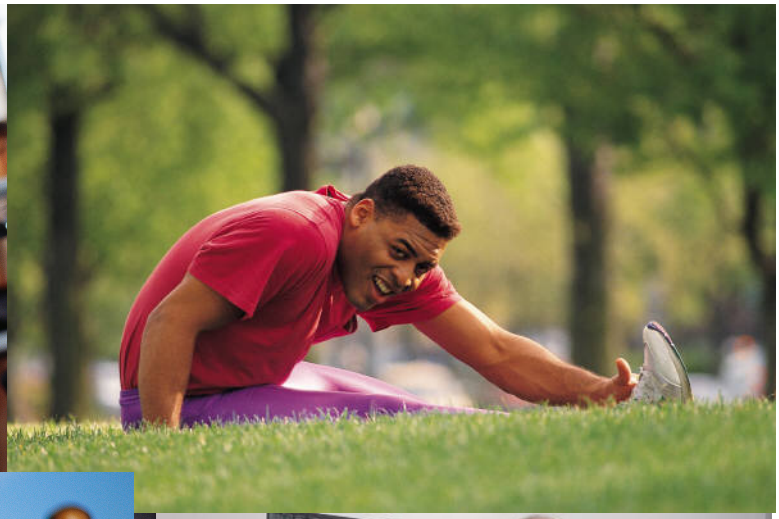
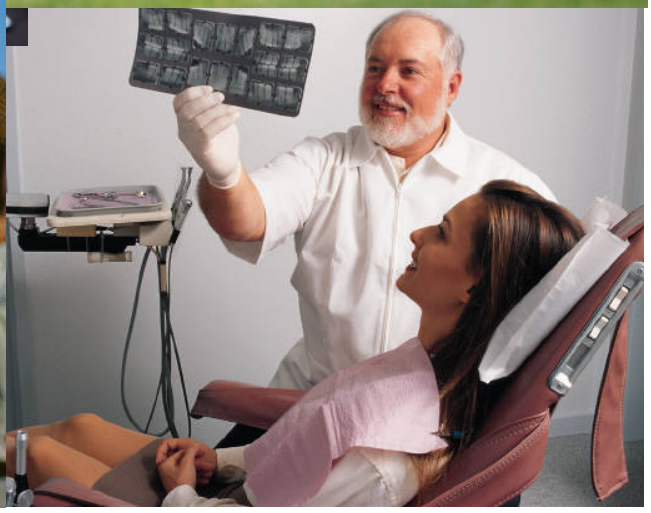
Health Risk Behaviors in the State of Michigan

2004 Behavioral Risk Factor Survey

18th Annual Report





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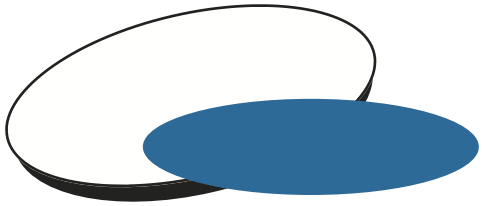

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We are especially grateful to the residents of Michigan who agreed to participate in this survey.

Table of Contents

2004 BRFS Summary

This report presents estimates from the 2004 Michigan Behavioral Risk Factor Survey (BRFS). The BRFS is a statewide telephone survey of Michigan residents, aged 18 years and older and is the only source of state-specific, population-based estimates of the prevalence of various behaviors, medical conditions, and preventive health care practices among Michigan adults. These results are used by public health agencies, academic institutions, non-profit organizations, and others to develop programs to promote the health of Michigan citizens.

All results from the 2004 Michigan BRFS presented in this report have been weighted as described in the Methods section and can be interpreted as estimates of the prevalence rates of various health risks among the general adult population of Michigan.

Selected Risk Factors	Michigan Estimates (%)	National Estimates	
		Median (%)[a]	Range (%)[b]
Health Status (Fair/Poor)	14.4	15.1	10.0 - 34.8
Diabetes	7.6	7.0	4.2 - 10.9
Obesity (BMI ≥ 30.0)	25.5	23.2	16.8 - 28.9
Overweight (25.0 ≤ BMI < 30.0)	35.5	36.9	33.0 - 39.8
No Leisure-Time Physical Activity	22.1	22.9	15.9 - 46.6
Current Asthma	8.3	8.3	4.6 - 10.3
Ever Asthma	13.5	13.2	10.3 - 18.8
Current Smoking	23.4	20.8	9.4 - 27.5
Binge Drinking	16.2	14.9	8.3 - 21.8
Heavy Drinking	4.7	4.8	2.8 - 7.4
Blood Stool Test in Past 2 Years (50+ Year Olds)	30.4	26.5	3.5 - 40.3
Ever Had a Sigmoidoscopy / Colonoscopy (50+ Year Olds)	60.3	53.0	33.6 - 66.3

[a] The median value of the prevalence estimates compiled from 49 U.S. states, two territories, and Washington, D.C. that participated in the 2004 BRFSS.
[b] The lowest and highest prevalence estimates among the states, Washington D.C., and U.S. territories that participated in 2004.

2004 BRFS Summary by Gender

Men

Selected Risk Factors for Men	Michigan Estimates (%)	National Estimates	
		Median (%)[a]	Range (%)[b]
Health Status (Fair/Poor)	13.0	13.5	9.6 - 30.2
Diabetes	7.3	7.2	4.3 - 11.6
Obesity (BMI ≥ 30.0)	24.9	23.6	17.5 - 28.6
Overweight (25.0 ≤ BMI < 30.0)	42.2	44.4	40.0 - 47.1
No Leisure-Time Physical Activity	19.9	20.8	15.5 - 40.2
Current Asthma	6.5	6.2	2.3 - 8.4
Ever Asthma	12.1	11.7	8.7 - 14.1
Current Smoking Status	25.0	23.0	11.7 - 29.3
Binge Drinking	24.3	23.0	13.0 - 30.6
Heavy Drinking	5.3	5.8	3.2 - 9.3
Had a PSA Test in Past 2 Years (40+ Year Olds)	54.1	52.0	44.5 - 60.8
Blood Stool Test in Past 2 Years (50+ Year Olds)	30.8	27.5	3.5 - 39.6
Ever Had a Sigmoidoscopy / Colonoscopy (50+ Year Olds)	61.3	52.5	32.9 - 66.5

Women

Selected Risk Factors for Women	Michigan Estimates (%)	National Estimates	
		Median (%)[a]	Range (%)[b]
Health Status (Fair/Poor)	15.7	16.4	10.4 - 38.8
Diabetes	7.9	6.4	3.8 - 10.9
Obesity (BMI ≥ 30.0)	26.0	22.5	15.9 - 30.3
Overweight (25.0 ≤ BMI < 30.0)	29.0	29.3	26.0 - 34.1
No Leisure-Time Physical Activity	24.2	25.2	15.6 - 52.3
Current Asthma	10.0	10.0	6.6 - 12.7
Ever Asthma	14.7	14.8	11.1 - 23.6
Current Smoking Status	22.0	19.0	7.2 - 26.4
Binge Drinking	8.9	7.6	3.5 - 13.5
Heavy Drinking	4.2	4.2	1.9 - 7.5
Pap Test in Past 3 Years (18+ Year Olds, Excludes Those Who Had a Hysterectomy)	86.5	85.9	72.4 - 89.7
Mammogram in Past 2 Years (40+ Year Olds)	78.7	74.6	61.0 - 82.4
Blood Stool Test in Past 2 Years (50+ Year Olds)	30.0	25.7	3.6 - 41.1
Ever Had a Sigmoidoscopy / Colonoscopy (50+ Year Olds)	59.4	53.2	34.1 - 67.0

[a] The median value of the prevalence estimates compiled from 49 U.S. states, two territories, and Washington, D.C. that participated in the 2004 BRFSS.
[b] The lowest and highest prevalence estimates among all states, Washington D.C., and U.S. territories that participated in 2004.

General Health Status

General health status is a reliable self-rated assessment of a one's perceived health, which may be influenced by all aspects of life, including behaviors, environmental factors, and community.[1] Self-rated general health status is useful in determining unmet health needs, identifying disparities among subpopulations, and characterizing the burden of chronic diseases within a population.[2-3] The prevalence of self-rated fair or poor health status has been found to be higher within older age groups, females, and minorities, and has also been associated with lower socioeconomic status in the presence or absence of disease.[4-6]

In 2004, an estimated 14.4% of Michigan adults perceived that their general health was either fair or poor. This proportion increased with age from 6.4% of those aged 18-24 years to 32.5% of those aged 75 years and older. Blacks were more likely than whites to report that their general health was either fair or poor (19.3% vs. 13.7%). The proportion who reported fair or poor health decreased with increasing education and income levels.

Over the past 10 years, the proportion of Michigan adults who reported fair or poor health has been relatively constant and similar to the U.S. median (Fig. 1). Blacks who lived in Michigan have consistently had a higher prevalence estimate than whites (Fig. 2).

Health Status
2004 Michigan BRFS

Demographic Characteristics	General Health, Fair or Poor[a]	
	%	95% Confidence Interval
Total	**14.4**	**(13.4 - 15.5)**
Age		
18 - 24	6.4	(4.1 - 10.0)
25 - 34	8.4	(6.2 - 11.4)
35 - 44	9.9	(8.0 - 12.2)
45 - 54	15.6	(13.2 - 18.3)
55 - 64	18.3	(15.6 - 21.3)
65 - 74	23.5	(20.1 - 27.3)
75 +	32.5	(28.3 - 37.0)
Gender		
Male	13.0	(11.4 - 14.7)
Female	15.7	(14.3 - 17.3)
Race		
White	13.7	(12.6 - 14.8)
Black	19.3	(15.6 - 23.8)
Education		
< High school	28.7	(23.7 - 34.2)
High school grad	18.5	(16.5 - 20.8)
Some college	14.0	(12.1 - 16.1)
College grad	6.2	(5.1 - 7.6)
Household Income		
< $20,000	32.8	(29.0 - 36.8)
$20,000 - $34,999	20.5	(17.8 - 23.5)
$35,000 - $49,999	11.1	(8.8 - 14.0)
$50,000 - $74,999	6.7	(5.0 - 8.7)
≥ $75,000	4.6	(3.4 - 6.1)

[a] The proportion who reported that their health, in general, was either fair or poor.

Figure 1: General Health: Fair or Poor
U.S. vs. Michigan, 1995-2004

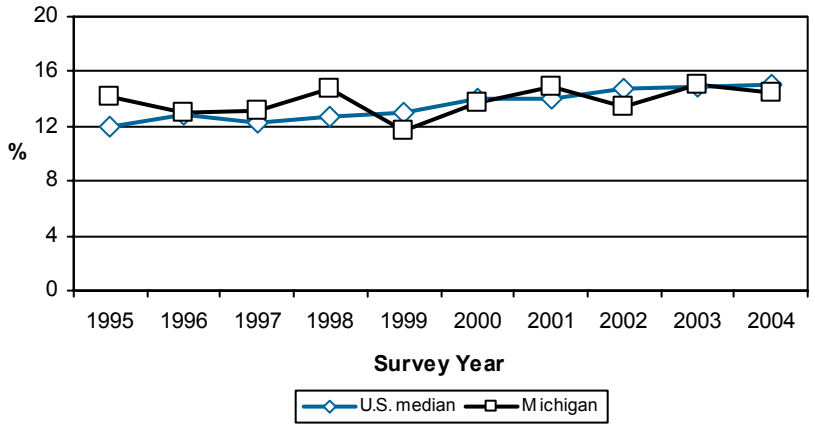
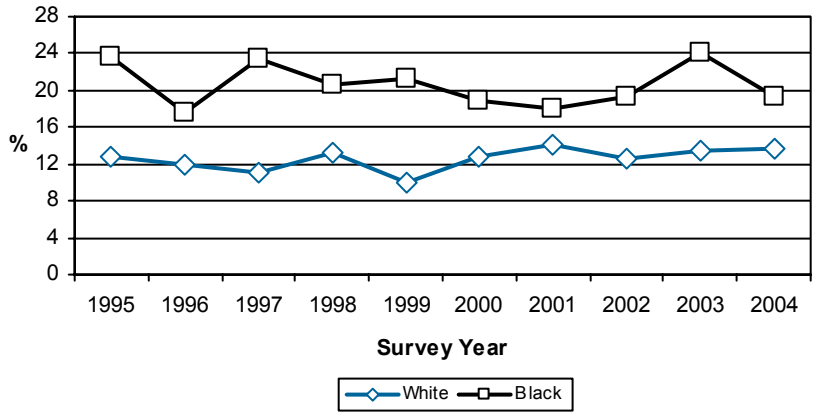


Figure 2: General Health Status: Fair or Poor by Race
Michigan 1995-2004



Quality of Life

"Health-related quality of life reflects a personal sense of physical and mental health and the ability to react to factors in the physical and social environments."[1] The literature indicates that younger adults tend to experience a higher number of days of poor mental health than physical health, but the opposite seems to be true for older adults.[1, 6-7]

An estimated 10.7% of Michigan adults had experienced physical health that was not good during at least two weeks of the past month. This proportion was higher among older adults than younger adults. Women were more likely than men to have experienced physical health that was not good (12.9% vs. 8.4%). This proportion decreased with higher education and income levels.

The proportion of Michigan adults who had mental health that was not good on at least 14 days in the past month was estimated to be 11.0%. This proportion was lower among older age groups, and women were more likely than men (13.0% vs. 8.9%) to report that their mental health was not good. This proportion decreased with higher income levels.

In 2004, the average number of days per month a Michigan adult did not have good physical health was 3.6, and for mental health the average was 3.8 days.

Health Status on at Least 14 Days in the Past Month

2004 Michigan BRFS

Demographic Characteristics	Physical Health Not Good[a]		Mental Health Not Good[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**10.7**	**(9.8 - 11.7)**	**11.0**	**(10.0 - 12.1)**
Age				
18 - 24	4.0	(2.2 - 7.2)	13.4	(9.8 - 18.0)
25 - 34	5.7	(3.9 - 8.4)	11.3	(8.7 - 14.4)
35 - 44	9.1	(7.2 - 11.3)	12.6	(10.5 - 15.1)
45 - 54	12.4	(10.2 - 14.9)	11.4	(9.4 - 13.7)
55 - 64	14.2	(11.7 - 17.1)	11.3	(9.0 - 13.9)
65 - 74	13.6	(11.0 - 16.7)	5.3	(3.8 - 7.5)
75 +	23.8	(20.0 - 28.0)	7.1	(5.0 - 9.9)
Gender				
Male	8.4	(7.1 - 9.9)	8.9	(7.5 - 10.5)
Female	12.9	(11.6 - 14.3)	13.0	(11.6 - 14.4)
Race				
White	10.2	(9.3 - 11.3)	10.6	(9.6 - 11.8)
Black	13.7	(10.4 - 18.0)	12.5	(9.4 - 16.5)
Education				
< High school	19.9	(15.8 - 24.8)	17.4	(13.1 - 22.7)
High school grad	13.1	(11.3 - 15.1)	11.8	(10.1 - 13.8)
Some college	10.8	(9.1 - 12.7)	12.9	(10.9 - 15.1)
College grad	5.5	(4.5 - 6.8)	6.6	(5.4 - 8.1)
Household Income				
< $20,000	22.7	(19.5 - 26.4)	22.3	(18.8 - 26.3)
$20,000 - $34,999	12.5	(10.4 - 14.9)	13.7	(11.3 - 16.6)
$35,000 - $49,999	8.3	(6.3 - 11.0)	8.8	(6.7 - 11.5)
$50,000 - $74,999	6.8	(5.0 - 9.3)	7.5	(5.8 - 9.8)
≥ $75,000	3.9	(2.9 - 5.3)	6.0	(4.6 - 7.8)

[a] The proportion who reported 14 or more days of poor physical health, which includes physical illness and injury, during the past 30 days.
[b] The proportion who reported 14 or more days of poor mental health, which includes stress, depression, and problems with emotions, during the past 30 days.

Among adults in the United States, those who have chronic diseases or disabilities report a higher number of unhealthy days within a previous month than those who do not have chronic conditions or disabilities.[6-7]

This also appears to be true in Michigan. Among Michigan adults who had ever been told by a doctor that they had diabetes, 29.7% (25.1-34.7) reported physical health that was not good on at least 14 days compared with 9.1% (8.2-10.1) of those who did not have diabetes. Those who had diabetes were also more likely to have mental health that was not good (15.2% [11.8-19.4] vs. 10.7% [9.6-11.8]).

Those who had current asthma were more than twice as likely to have physical health that was not good (22.4% [18.1-27.3] vs. 9.6% [8.7-10.6]) and were twice as likely to have mental health that was not good (20.4% [16.2-25.4] vs. 10.1 [9.1-11.2]) compared with those who did not have asthma.

No Health Care Coverage

Adults who do not have health care coverage are less likely to access health care services, including preventive care, primary care, and tertiary care, and delay getting needed medical attention.[8-9] Utilization of preventive health care services, such as mammography, pap tests, prostate exams, influenza vaccinations, and cholesterol tests, could reduce the prevalence and severity of diseases and chronic conditions in the United States.[10]

In the 2004 BRFS, an estimated 14.2% of Michigan adults aged 18-64 years had no health care coverage. This proportion decreased with age from 28.6% of those aged 18-24 years to 8.8% of those aged 55-64 years. The proportion who were uninsured decreased with education and income levels.

During the past 10 years, Michigan has consistently had a lower estimated proportion of adults who did not have health care coverage than the U.S. median (Fig. 3).

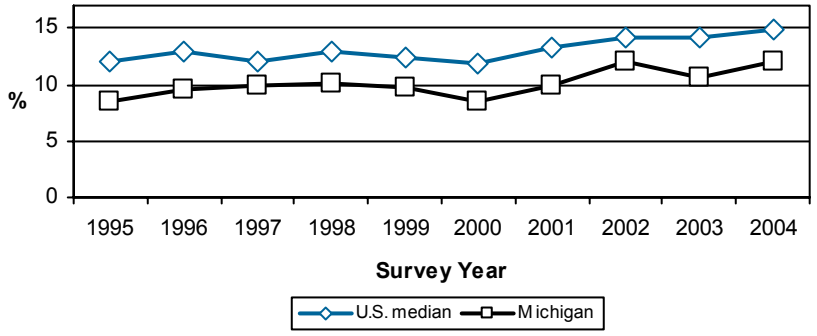
An estimated 15.7% (14.4-17.0) of Michigan adults did not have a personal doctor or health care provider in 2004. The proportion of Michigan adults who needed to see a doctor in the past year but could not due to the cost was estimated to be 12.0% (10.9-13.1).

No Health Care Coverage
Among Adults Aged 18-64 Years
2004 Michigan BRFS

Demographic Characteristics	No Health Care Coverage[a]	
	%	95% Confidence Interval
Total	**14.2**	**(12.8 - 15.7)**
Age		
18 - 24	28.6	(23.2 - 34.6)
25 - 34	16.1	(12.9 - 20.0)
35 - 44	11.2	(9.0 - 13.8)
45 - 54	9.9	(8.1 - 12.0)
55 - 64	8.8	(6.7 - 11.4)
Gender		
Male	15.6	(13.4 - 18.0)
Female	12.8	(11.2 - 14.6)
Race		
White	13.7	(12.2 - 15.3)
Black	16.3	(12.3 - 21.1)
Education		
< High school	35.4	(27.8 - 43.8)
High school grad	17.9	(15.3 - 20.9)
Some college	13.0	(10.7 - 15.6)
College grad	6.2	(4.8 - 8.1)
Household Income		
< $20,000	30.4	(25.5 - 35.7)
$20,000 - $34,999	25.8	(21.8 - 30.3)
$35,000 - $49,999	11.1	(8.3 - 14.7)
$50,000 - $74,999	7.9	(5.6 - 11.1)
≥ $75,000	2.1	(1.2 - 3.8)

[a] Among those aged 18-64 years, the proportion who reported having no health care coverage, including health insurance, prepaid plans such as HMOs, or government plans, such as Medicare.

Figure 3: No Health Care Coverage
Among Adults Aged 18 Years and Older
U.S. vs. Michigan, 1995-2004



Adults who do not have insurance are more likely than those who have health insurance to have more health risk factors, such as current smoking status and lack of physical activity.[11]

In 2004, among those aged 18-64 years who did not have insurance, the proportion who were current smokers was 45.9% (40.4-51.5), whereas among insured adults in the same age range, an estimated 23.4% (21.7-25.2) were current smokers.

Michigan adults who did not have insurance were more likely than those who did to have not participated in any leisure-time physical activity, such as running, calisthenics, golf, gardening, or walking, in the past month (28.4% [23.6-33.7] vs. 19.1% [17.6-20.7]).

Those who were uninsured were twice as likely to have 14 or more days of mental health that was not good when compared with those who were insured (20.3% [16.2-25.0] vs. 10.6% [9.5-11.9]). There was no difference between those who did and did not have insurance when it came to their physical health not being good (9.1% [8.0-10.2] vs. 9.7% [7.1-13.2]).

Diabetes

Diabetes mellitus is a chronic disease characterized by high glucose levels, owing to insufficient production of insulin by the pancreas or to a reduction in the body's ability to use insulin.[12-13] In Michigan, diabetes was the sixth leading cause of death with 2,620 individuals[14] in 2003 and was considered the primary cause in 3.0% of all deaths.[15] Obesity, poor diet, physical inactivity, and high blood pressure are just a few risk factors that are associated with the increase in diabetes prevalence.[12]

In 2004, an estimated 7.6% of Michigan adults had ever been told by a health care professional that they have diabetes. This estimate was higher among older adults. The proportion of those who had diabetes declined with higher education and income levels.

In Michigan, there has been an increase in the prevalence of diabetes between 1995 and 2004, and Michigan's prevalence estimate has been consistently higher than the U.S. median for most years (Fig. 4). During this same time period, the prevalence of obesity, a risk factor for diabetes, has also been increasing in the U.S.[16] and in Michigan (Fig. 6). Michigan adults who were obese were more than twice as likely as those who were overweight and over three times as likely as those who were not overweight or obese to have diabetes in 2004 (14.5% [12.5-16.8], 6.5% [5.3-7.9], 4.1% [3.3-5.2] respectively). The estimated prevalence of diabetes among those who were obese has been consistently higher than those who were overweight and those who were not overweight or obese since 1997 (Fig. 5). The prevalence estimate of diabetes among those who were obese was higher in 2002 (15.7% [13.6-18.1]) when compared to the prevalence estimate in 1999 (11.3% [8.8-14.5]).

Diabetes
2004 Michigan BRFS

Demographic Characteristics	Ever Told Diabetes[a]	
	%	95% Confidence Interval
Total	**7.6**	**(6.9 - 8.5)**
Age		
18 - 24	0.9	(0.3 - 2.5)
25 - 34	0.9	(0.4 - 2.2)
35 - 44	4.6	(3.3 - 6.5)
45 - 54	8.6	(6.8 - 10.8)
55 - 64	15.7	(13.1 - 18.6)
65 - 74	15.3	(12.5 - 18.6)
75 +	16.9	(13.6 - 20.8)
Gender		
Male	7.3	(6.2 - 8.6)
Female	7.9	(7.0 - 9.0)
Race		
White	7.3	(6.5 - 8.1)
Black	9.4	(6.8 - 12.9)
Education		
< High school	12.9	(9.8 - 16.8)
High school grad	9.2	(7.8 - 10.8)
Some college	7.0	(5.7 - 8.6)
College grad	5.1	(4.1 - 6.5)
Household Income		
< $20,000	15.6	(12.8 - 18.9)
$20,000 - $34,999	10.0	(8.2 - 12.0)
$35,000 - $49,999	6.3	(4.7 - 8.4)
$50,000 - $74,999	4.5	(3.3 - 6.1)
≥ $75,000	3.2	(2.2 - 4.8)

[a] The proportion who reported that they were ever told by a doctor that they have diabetes. Women who had diabetes only during pregnancy were considered not to have been diagnosed.

Figure 4: Diabetes
U.S. vs. Michigan, 1995-2004

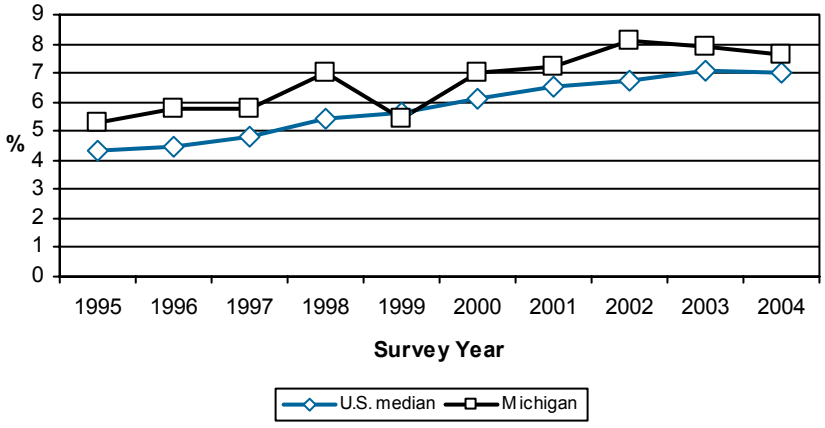
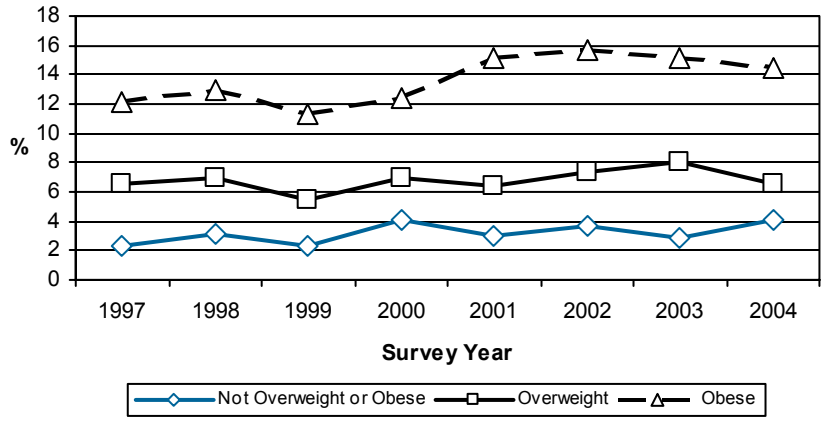


Figure 5: Diabetes by Weight Status
Michigan, 1997-2004



Weight Status

Obese and overweight adults are at a higher risk than adults who are at a healthy weight status to develop chronic conditions, such as high blood pressure, diabetes, gallbladder disease, osteoarthritis, and high cholesterol.[17] In Michigan, obesity-related medical expenditures have been estimated to be $2.9 billion in 2003 dollars.[18] Overweight is defined as having a body mass index (BMI) between 25.0 and 29.9; an obese weight status is a BMI greater than or equal to 30.0. BMI is defined as weight in kilograms divided by height in meters squared (w/h^2) and was calculated from the self-reported height and weight measurements of Michigan residents participating in the 2004 BRFS.

An estimated 25.5% of Michigan adults were obese in 2004. The proportion of adults who were obese increased with age from 13.5% of those aged 18-24 years to 31.9% of those aged 55-64 years, and then decreased to 17.4% of those aged 75 years and older. Blacks were more likely than whites to be obese (33.6% vs. 24.2%). This proportion declined with higher education and income levels.

In 2004, an estimated 35.5% (33.9-37.1) of Michigan adults were overweight, having a BMI between 25.0 and 29.9.This proportion increased with age from 26.9% (21.7-32.9) of those aged 18-24 years to 41.8% (38.1-45.6) of those aged 55-64 years, and then decreased to 37.7% (33.2-42.3) of those aged 75 years and older. Men were more likely than women (42.2% [39.7-44.7] vs. 29.0% [27.1-30.9]) to be overweight.

Obesity
2004 Michigan BRFS

Demographic Characteristics	Obese[a] %	Obese[a] 95% Confidence Interval
Total	**25.5**	**(24.0 - 26.9)**
Age		
18 - 24	13.5	(9.8 - 18.3)
25 - 34	22.3	(18.7 - 26.4)
35 - 44	28.6	(25.3 - 32.0)
45 - 54	31.7	(28.5 - 35.1)
55 - 64	31.9	(28.5 - 35.6)
65 - 74	25.9	(22.4 - 29.8)
75 +	17.4	(14.1 - 21.3)
Gender		
Male	24.9	(22.8 - 27.3)
Female	26.0	(24.2 - 27.8)
Race		
White	24.2	(22.7 - 25.7)
Black	33.6	(28.6 - 39.1)
Education		
< High school	30.1	(24.9 - 35.8)
High school grad	30.3	(27.7 - 33.1)
Some college	27.6	(24.9 - 30.5)
College grad	17.1	(15.0 - 19.3)
Household Income		
< $20,000	32.7	(28.8 - 36.9)
$20,000 - $34,999	29.1	(25.9 - 32.5)
$35,000 - $49,999	25.6	(22.0 - 29.5)
$50,000 - $74,999	27.3	(23.8 - 31.1)
≥ $75,000	20.0	(17.2 - 23.1)

Note: BMI, body mass index, is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in meters)^2]. Weight and height were self-reported. Pregnant women were excluded.
[a] The proportion of respondents whose BMI was greater than or equal to 30.0.

Michigan has consistently had higher obesity prevalence rates than the U.S. median (Fig. 6). In 2004, the State of Michigan had the tenth highest obesity level among all participating states and territories, and between 1997 and 2003, the prevalence of obesity among blacks in Michigan increased 1.7 times more than the prevalence among whites (Fig. 7).

Figure 6: Obesity
U.S. vs. Michigan, 1995-2004

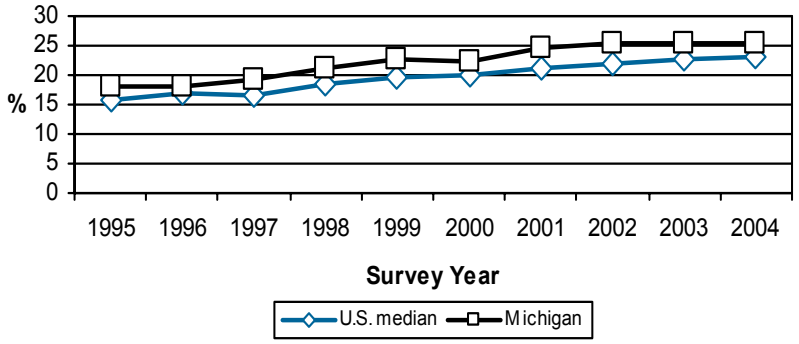
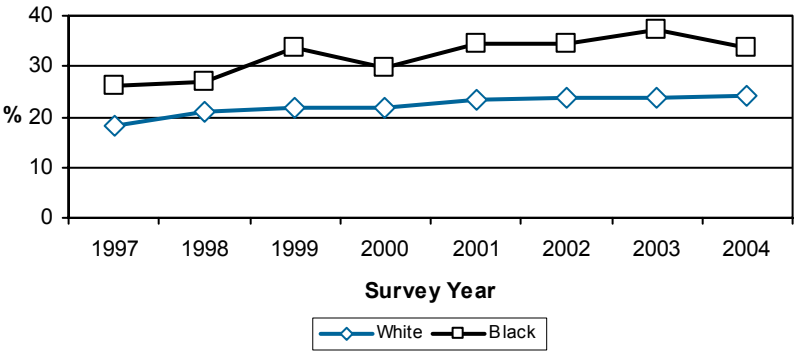


Figure 7: Obesity by Race
Michigan, 1997-2004



No Leisure-Time Physical Activity

Regular physical activity has been shown to reduce the risk of premature mortality and a number of chronic diseases, such as colon cancer, hypertension, cardiovascular disease, and diabetes. Keeping physically active not only helps maintain a healthy body weight and normal muscle strength, bone mass, and joint function, but it also can relieve symptoms of depression.[19]

In 2004, an estimated 22.1% of Michigan adults did not participate in any leisure-time physical activity (physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise in the past month). This proportion was higher among older adults than among younger adults. Women were more likely than men (24.2% vs. 19.9%), and blacks were more likely than whites (32.8% vs. 20.0%) to not participate in leisure-time physical activity. Inactivity during leisure time decreased with higher education and income levels.

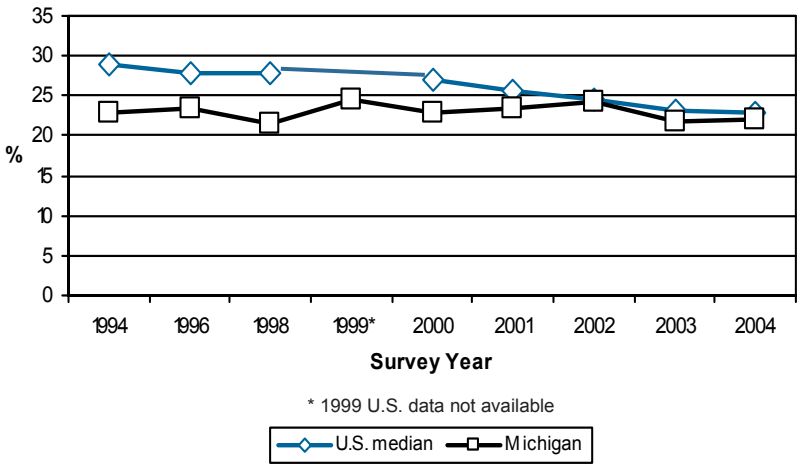
Over the past 11 years, the median prevalence of no leisure-time physical activity for the United States has decreased from 28.8% in 1994 to 22.8% in 2004, whereas in Michigan, the prevalence has stayed relatively consistent (Fig. 8).

No Leisure-Time Physical Activity
2004 Michigan BRFS

Demographic Characteristics	No Leisure-Time Physical Activity[a]	
	%	95% Confidence Interval
Total	**22.1**	**(20.8 - 23.5)**
Age		
18 - 24	18.8	(14.4 - 24.0)
25 - 34	19.0	(15.6 - 23.0)
35 - 44	20.5	(17.7 - 23.7)
45 - 54	20.3	(17.7 - 23.2)
55 - 64	23.5	(20.4 - 26.9)
65 - 74	25.7	(22.2 - 29.6)
75 +	37.3	(33.0 - 41.9)
Gender		
Male	19.9	(17.8 - 22.0)
Female	24.2	(22.5 - 26.0)
Race		
White	20.0	(18.7 - 21.5)
Black	32.8	(28.0 - 38.1)
Education		
< High school	36.1	(30.7 - 41.9)
High school grad	31.2	(28.6 - 34.0)
Some college	19.7	(17.3 - 22.3)
College grad	10.8	(9.2 - 12.7)
Household Income		
< $20,000	39.3	(35.1 - 43.6)
$20,000 - $34,999	27.5	(24.3 - 31.0)
$35,000 - $49,999	19.2	(16.1 - 22.7)
$50,000 - $74,999	15.6	(12.9 - 18.8)
≥ $75,000	11.9	(9.8 - 14.4)

[a] The proportion who reported not participating in any leisure-time physical activities or exercises, such as running, calisthenics, golf, gardening, or walking, during the past month.

Figure 8: No Leisure-Time Physical Activity
U.S. vs. Michigan, 1994-2004



During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

Asthma

Asthma is a chronic inflammatory disorder of the lungs, and is characterized by wheezing, coughing, difficulty breathing, and chest tightness. Asthma attacks can be triggered by a variety of factors, such as cold air, allergens, irritants, and respiratory viral infections. Allergies, a family history of asthma or allergy, low birth weight, and exposure to tobacco smoke are just a few potential risk factors that are associated with the development of asthma.[20-24]

The estimated proportion of Michigan adults ever told by a health care professional that they had asthma was 13.5% in 2004. Women were more likely than men to have ever been told this (14.7% vs. 12.1%). Over the past 5 years, the proportion of Michigan adults who reported ever having asthma has been relatively consistent with the U.S. median (Fig. 9).

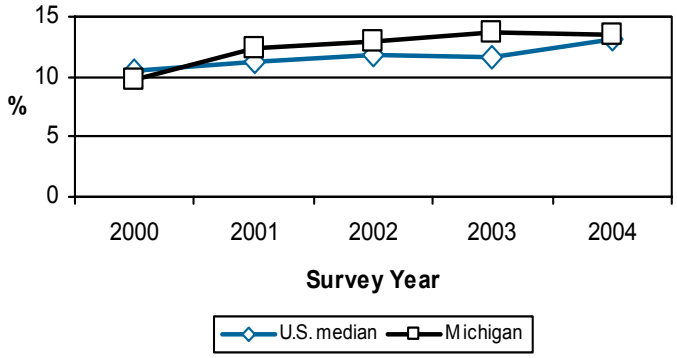
Among those who had ever been told that they had asthma, 63.2% (58.6-67.6) were estimated to still have asthma. An estimated 8.3% of all Michigan adults currently had asthma in 2004. A higher proportion of women than men reported this (10.0% vs. 6.5%).

Asthma
2004 Michigan BRFS

Demographic Characteristics	Ever Told Have Asthma[a]		Still Have Asthma[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**13.5**	**(12.4 - 14.7)**	**8.3**	**(7.4 - 9.2)**
Age				
18 - 24	17.3	(13.2 - 22.3)	9.1	(6.1 - 13.3)
25 - 34	16.1	(13.0 - 19.8)	9.4	(7.1 - 12.4)
35 - 44	10.9	(9.0 - 13.2)	6.4	(5.0 - 8.3)
45 - 54	13.2	(11.1 - 15.6)	8.8	(7.0 - 10.9)
55 - 64	14.0	(11.5 - 16.8)	9.0	(7.0 - 11.4)
65 - 74	12.3	(9.9 - 15.2)	9.2	(7.1 - 11.8)
75 +	10.2	(7.6 - 13.6)	6.7	(4.7 - 9.6)
Gender				
Male	12.1	(10.5 - 14.0)	6.5	(5.3 - 8.0)
Female	14.7	(13.3 - 16.2)	10.0	(8.8 - 11.3)
Race				
White	13.2	(12.0 - 14.4)	8.0	(7.1 - 9.0)
Black	13.5	(10.1 - 17.7)	8.4	(5.7 - 12.2)
Education				
< High school	17.0	(13.0 - 22.0)	11.4	(8.2 - 15.7)
High school grad	11.4	(9.6 - 13.3)	7.5	(6.1 - 9.2)
Some college	15.6	(13.4 - 18.0)	9.0	(7.4 - 11.0)
College grad	12.5	(10.7 - 14.6)	7.4	(6.0 - 9.0)
Household Income				
< $20,000	18.2	(15.0 - 21.9)	11.5	(9.0 - 14.5)
$20,000 - $34,999	13.8	(11.5 - 16.5)	9.7	(7.8 - 12.1)
$35,000 - $49,999	11.7	(9.2 - 14.9)	6.4	(4.6 - 8.9)
$50,000 - $74,999	12.2	(9.8 - 15.2)	6.8	(5.0 - 9.0)
≥ $75,000	11.8	(9.8 - 14.2)	6.7	(5.2 - 8.7)

[a] The proportion who reported that they were ever told by a doctor, nurse, or other health care professional that they had asthma.
[b] Among all respondents, the proportion who reported that they still had asthma.

Figure 9: Ever Told Have Asthma
U.S. vs. Michigan, 2000 - 2004



Of those who had current asthma, 55.0% (49.2-60.6) reported that they had had an asthma attack in the past 12 months. An estimated 45.6% (39.7-51.6) of those with current asthma reported that they were <16 years of age when they were first told by a health care professional that they had asthma, and 68.0% (60.9-74.3) of those ever diagnosed with asthma reported that they were <16 years old when they were first told that they had asthma.

Have you ever been told by a doctor, nurse or other health professional that you had asthma?

Do you still have asthma?

Environmental Factors

Environmental factors, such as indoor and outdoor air quality, can affect human health and well-being. Indoor and outdoor air pollution can result in premature death, respiratory problems, heart or lung disease, and cancer.[25-27] Questions about poor indoor air quality and outdoor air pollution were included in the 2004 BRFS to obtain state population prevalence estimates on the exposure of these environmental hazards.

In 2004, 22.9% of Michigan adults reported that in the past 12 months, they had an illness or symptom that they thought was caused by something in the air inside a home, office or other building. This proportion decreased with age from 30.3% of those aged 18-24 years to 9.7% of those aged 75 years and older. Women were more likely than men to report they had experienced illness or symptoms due to poor indoor air quality (25.5% vs. 20.0%). This proportion declined with higher income levels.

An estimated 9.0% of Michigan adults reported that in the past 12 months, they had an illness or symptom that they thought was caused by pollution in the air outdoors. Women were more likely than men (10.4% vs. 7.5%), and blacks were more likely than whites (12.2% vs. 8.3%) to report an illness caused by outdoor air pollution due to things like smog, automobile exhaust, and chemicals.

Experienced Illness/Symptoms Caused by Environmental Factors
2004 Michigan BRFS

Demographic Characteristics	Poor Indoor Air Quality[a]		Outdoor Air Pollution[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**22.9**	**(21.5 - 24.3)**	**9.0**	**(8.1 - 10.0)**
Age				
18 - 24	30.3	(24.9 - 36.2)	10.0	(6.9 - 14.3)
25 - 34	27.5	(23.6 - 31.8)	7.2	(5.2 - 10.0)
35 - 44	24.7	(21.9 - 27.8)	8.8	(6.9 - 11.1)
45 - 54	23.6	(20.9 - 26.5)	10.6	(8.6 - 13.0)
55 - 64	20.6	(17.7 - 23.9)	10.8	(8.6 - 13.5)
65 - 74	11.4	(9.1 - 14.2)	9.6	(7.4 - 12.2)
75 +	9.7	(7.3 - 12.8)	3.9	(2.4 - 6.2)
Gender				
Male	20.0	(17.9 - 22.3)	7.5	(6.2 - 9.1)
Female	25.5	(23.7 - 27.3)	10.4	(9.1 - 11.7)
Race				
White	22.3	(20.8 - 23.8)	8.3	(7.4 - 9.4)
Black	25.0	(20.6 - 30.1)	12.2	(9.2 - 16.1)
Education				
< High school	18.2	(13.7 - 23.7)	8.6	(5.7 - 13.0)
High school grad	21.2	(18.9 - 23.8)	9.7	(8.0 - 11.6)
Some college	26.9	(24.2 - 29.8)	9.2	(7.6 - 11.1)
College grad	22.0	(19.7 - 24.5)	8.2	(6.8 - 10.0)
Household Income				
< $20,000	26.1	(22.4 - 30.2)	11.9	(9.3 - 15.2)
$20,000 - $34,999	24.0	(20.8 - 27.4)	11.3	(9.0 - 14.0)
$35,000 - $49,999	23.9	(20.3 - 27.8)	7.9	(5.8 - 10.6)
$50,000 - $74,999	22.9	(19.7 - 26.4)	8.9	(6.8 - 11.4)
≥ $75,000	21.6	(18.8 - 24.6)	7.8	(6.1 - 9.9)

[a] The proportion who reported 'Yes' to the following question: "Things like dust, mold, smoke, and chemicals inside the home or office can cause poor indoor air quality. In the past 12 months have you had an illness or symptom that you think was caused by something in the air inside a home, office, or other building?"
[b] The proportion who reported 'Yes' to the following question: "Things like smog, automobile exhaust, and chemicals can cause outdoor air pollution. In the past 12 months have you had an illness or symptom that you think was caused by pollution in the air outdoors?"

Environmental factors, such as tobacco smoke, indoor/outdoor air pollution, and exposure to occupational dusts and chemicals, aggravate respiratory diseases, e.g. asthma, emphysema, and chronic bronchitis.[21-23, 28] Those who currently had asthma were twice as likely to report symptoms related to poor indoor air quality (46.4% [40.7-52.1] vs. 20.6% [19.2-22.1]) and three times as likely to report symptoms related to outdoor air pollution (22.8% [18.6-27.6] vs. 7.8% [6.9-8.8]) than those who did not currently have asthma.

Things like dust, mold, smoke, and chemicals inside the home or office can cause poor indoor air quality. In the past 12 months have you had an illness or symptom that you think was caused by something in the air inside a home, office, or other building?

Things like smog, automobile exhaust, and chemicals can cause outdoor air pollution. In the past 12 months have you had an illness or symptom that you think was caused by pollution in the air outdoors?

Cigarette Consumption

Smoking contributes to the development of many kinds of chronic conditions, including cancers, respiratory diseases, and cardiovascular diseases, and "remains the leading preventable cause of premature death in the United States." It has been estimated that smoking costs the United States $75.5 billion in direct medical expenditures for adults with an additional $81.9 billion in lost productivity.[29]

Current smoking status was defined as ever having smoked 100 cigarettes (five packs) in their life and smoking cigarettes now, either every day or on some days, whereas former smoking status was defined as having smoked at least 100 cigarettes but not currently smoking.

In 2004, an estimated 23.4% of Michigan adults were current smokers, and 25.3% [24.0-26.7] were estimated to be former smokers. Men were more likely than women to be current smokers (25% vs. 22.0%) and former smokers (29.6% [27.4-31.9] vs. 21.4% [19.9-23.0]), while women were more likely to have never smoked (56.6% [54.6-58.7] vs. 45.5% [42.9-48.1]). Whites and blacks had similar prevalence rates for current smoking, however, whites were more likely than blacks to be former smokers (27.0% [25.6-28.5] vs. 18.3% [14.6-22.7]), and blacks were more likely to have never smoked (58.1% [52.7-63.4] vs. 49.8% [48.0-51.6]). The prevalence of current smoking declined with age, education, and income level.

The proportion of Michigan adults who were current smokers has remained above the U.S. median in the past ten years (Fig. 10). To achieve the Healthy People goal of a cigarette smoking prevalence of 12% by 2010,[30] the proportion of current smokers in Michigan will need to drop just over 2.0 percentage points each year.

Cigarette Consumption
2004 Michigan BRFS

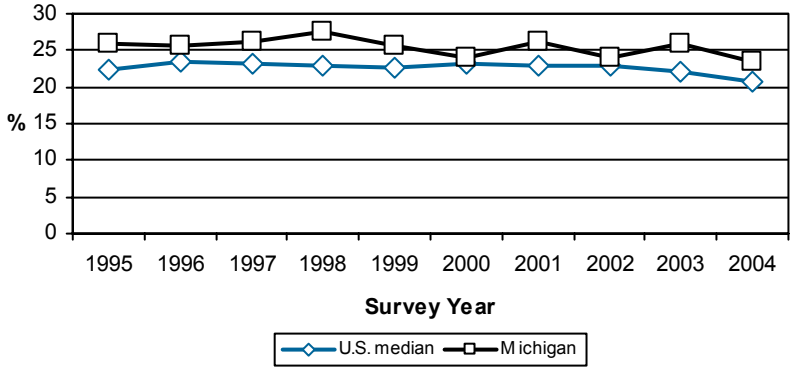
Demographic Characteristics	Current Smoking[a]	
	%	95% Confidence Interval
Total	**23.4**	**(22.0 - 24.9)**
Age		
18 - 24	40.8	(34.9 - 47.0)
25 - 34	24.5	(20.7 - 28.6)
35 - 44	25.6	(22.6 - 28.9)
45 - 54	24.1	(21.3 - 27.0)
55 - 64	20.1	(17.2 - 23.3)
65 - 74	11.8	(9.4 - 14.8)
75 +	5.2	(3.5 - 7.8)
Gender		
Male	25.0	(22.7 - 27.4)
Female	22.0	(20.2 - 23.8)
Race		
White	23.2	(21.6 - 24.8)
Black	23.6	(19.3 - 28.4)
Education		
< High school	41.5	(35.5 - 47.7)
High school grad	29.1	(26.5 - 31.9)
Some college	25.1	(22.5 - 27.9)
College grad	10.4	(8.7 - 12.4)
Household Income		
< $20,000	35.7	(31.4 - 40.1)
$20,000 - $34,999	28.9	(25.5 - 32.6)
$35,000 - $49,999	24.9	(21.3 - 28.8)
$50,000 - $74,999	19.9	(16.8 - 23.3)
≥ $75,000	14.3	(11.8 - 17.1)

[a] The proportion who reported that they had ever smoked at least 100 cigarettes (five packs) in their life and that they smoke cigarettes now, either every day or on some days.

An estimated 61.6% (58.0-65.0) of current smokers in Michigan tried to quit smoking for one day or longer in the past year. This proportion decreased with age from 71.2% (64.7-76.9) of those aged 18-34 years to 56.8% (51.9-61.6) of those aged 35-54 years to 50.7% (44.0-57.3) of those aged 55 years and older.

The health risk from smoking affects not only smokers but also those around them. Environmental smoke (second-hand smoke) has been linked to lung cancer deaths and heart disease in non-smoking adults and respiratory illnesses, such as asthma and bronchitis, in children.[31] Among current smokers, 44.9% (41.3-48.6) had at least one child living in their household. It is unknown if these households require current smokers to smoke outdoors.

Figure 10: Current Cigarette Smoking
U.S. vs. Michigan, 1995-2004



Alcohol Consumption

Alcohol abuse has been associated with serious health problems, such as cirrhosis of the liver, high blood pressure, stroke, and some types of cancer, and can increase the risk for motor vehicle accidents, injuries, violence, and suicide.[32-34] In Michigan, the percent of fatal motor vehicle crashes that involved any alcohol was 38.0% in 2004.[35]

In 2004, an estimated 16.2% of Michigan adults was estimated to have engaged in binge drinking, i.e., the consumption of five or more alcoholic beverages during one occasion. The proportion for binge drinking decreased with age from 31.7% of those aged 18-24 years to 1.7% of those aged 75 years and older. Men were more likely than women (24.3% vs. 8.9%), and whites were more likely than blacks (17.2% vs. 10.8%) to have engaged in binge drinking. When compared to the United States median, Michigan has consistently had a higher prevalence of binge drinking (Fig. 11). To achieve the Healthy People goal of a binge drinking prevalence of 6% by 2010,[34] the proportion in Michigan will need to drop about 2.0 percentage points each year.

The proportion who engaged in heavy drinking, i.e., the consumption of more than two alcoholic beverages per day for men or more than one alcoholic beverage per day for women was 4.7% (4.0-5.5). The proportion of Michigan adults who engaged in heavy drinking has remained similar to the U.S. median (Fig. 12).

Binge Drinking
2004 Michigan BRFS

Demographic Characteristics	Binge Drinking[a] %	95% Confidence Interval
Total	**16.2**	**(14.9 - 17.6)**
Age		
18 - 24	31.7	(26.2 - 37.8)
25 - 34	22.4	(18.7 - 26.5)
35 - 44	18.4	(15.8 - 21.4)
45 - 54	14.1	(11.9 - 16.8)
55 - 64	9.2	(7.2 - 11.6)
65 - 74	5.4	(3.8 - 7.6)
75 +	1.7	(0.8 - 3.4)
Gender		
Male	24.3	(22.0 - 26.7)
Female	8.9	(7.6 - 10.3)
Race		
White	17.2	(15.8 - 18.8)
Black	10.8	(7.8 - 14.8)
Education		
< High school	19.2	(14.2 - 25.3)
High school grad	17.4	(15.2 - 20.0)
Some college	18.4	(16.0 - 21.2)
College grad	11.8	(10.0 - 13.9)
Household Income		
< $20,000	16.4	(12.8 - 20.7)
$20,000 - $34,999	16.6	(13.7 - 20.0)
$35,000 - $49,999	18.9	(15.7 - 22.7)
$50,000 - $74,999	19.8	(16.7 - 23.4)
≥ $75,000	15.1	(12.7 - 17.9)

[a] The proportion of respondents who reported consuming five or more drinks per occasion at least once in the previous month.

One-quarter of Michigan underage adults, aged 18-20 years, reported binge drinking in the previous month (25.0% [17.5-34.3]). An estimated 5.2% (2.3-11.0) of underage adults reported heavy drinking in 2004.

Figure 11: Binge Drinking
U.S. vs. Michigan, 1995-2004

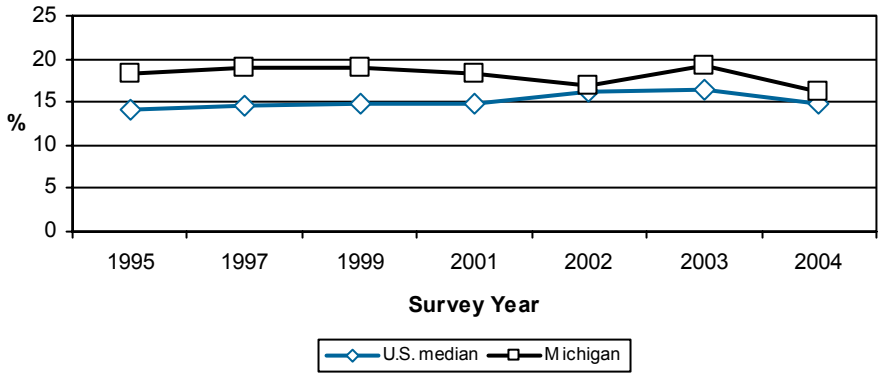
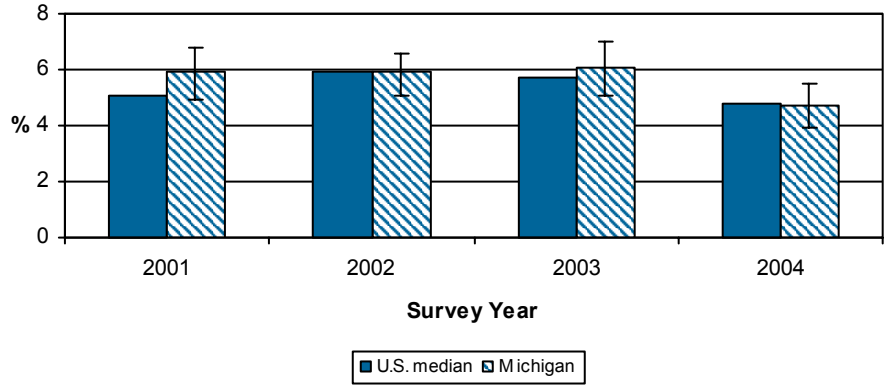


Figure 12: Heavy Drinking
U.S. vs. Michigan, 2001-2004



Breast Cancer Screening

Breast cancer is the second leading cause of cancer deaths among United States women.[36-37] In 2003, there were 1,425 deaths among Michigan women due to breast cancer, second only to that of lung cancer.[38] Early detection of breast cancer can occur through the use of screening tools such as mammography and clinical breast exams. Current recommendations from the American Cancer Society include that women aged 20-39 years should have a clinical or physical breast exam by a health professional every three years, and women aged 40 years and older should have both a clinical breast exam (CBE) and mammogram annually.[36-37, 39]

In 2004, an estimated 55.7% of Michigan women aged 40 years and older had both a clinical breast exam and mammogram in the past year. This proportion increased with age from 52.4% of those aged 40-49 years to 62.1% of those aged 60-69 years. This prevalence estimate increased with education and income levels.

Nearly three-quarters (74.2% [72.4-76.0]) of Michigan women had an appropriately timed CBE, i.e., women aged 20-39 years who had a CBE in the previous 3 years and women aged 40 years and older who had a CBE within the previous year. This proportion increased with education level from 59.9% (51.8-67.5) of those who did not have a high school diploma to 83.1% (80.3-85.6) who were college graduates. An estimated 62.7% (60.4-65.0) of women aged 40 years and older had a mammogram in the past year. This proportion increased with age from 56.6% (52.3-60.8) of those aged 40-49 years to 71.5% (66.7-75.9) of those aged 60-69 years and then declined to 62.0% (57.4-66.4) of those aged 70 years and older. This proportion also increased with education and income levels.

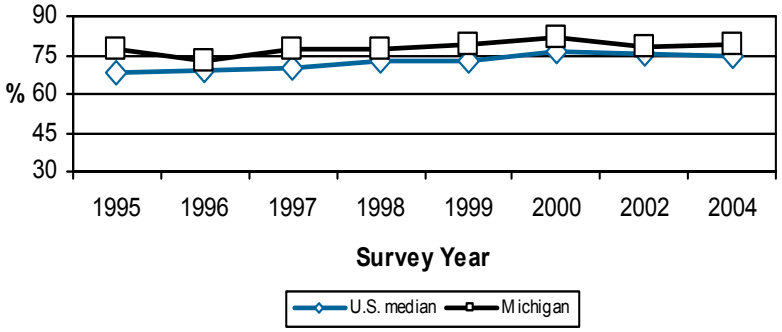
Figure 13 shows the Healthy People 2010 indicator concerning the proportion of women aged 40 years and older who have received a mammogram within the preceding two years.[40] The proportion of Michigan women aged 40 years and older who have received a mammogram in the past two years has remained slightly above the U.S. median for the past ten years.

Breast Cancer Screening
Among Women Aged 40 Years and Older
2004 Michigan BRFS

Demographic Characteristics	Had Clinical Breast Exam and Mammogram in Past Year[a]	
	%	95% Confidence Interval
Total	**55.7**	**(53.4 - 58.0)**
Age		
40 - 49	52.4	(48.1 - 56.6)
50 - 59	58.9	(54.2 - 63.4)
60 - 69	62.1	(56.9 - 67.0)
70 +	52.6	(47.9 - 57.2)
Race		
White	56.8	(54.3 - 59.2)
Black	52.1	(43.7 - 60.4)
Education		
< High school	44.5	(36.2 - 53.0)
High school grad	53.3	(49.4 - 57.2)
Some college	54.6	(50.2 - 59.0)
College grad	63.3	(58.9 - 67.4)
Household Income		
< $20,000	42.9	(37.5 - 48.5)
$20,000 - $34,999	49.7	(44.5 - 54.9)
$35,000 - $49,999	58.5	(51.9 - 64.7)
$50,000 - $74,999	60.9	(54.7 - 66.7)
≥ $75,000	65.2	(59.5 - 70.5)

Note: Data included diagnostic tests.
[a] Among women aged 40 years and older, the proportion who had both a clinical breast exam and mammogram in the previous year.

Figure 13: Had a Mammogram in the Past Two Years
Among Women Aged 40 Years and Older
U.S. vs. Michigan, 1995-2004



A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?

How long has it been since you had your last mammogram?

A clinical breast exam is when a doctor, nurse, or other health professional feels the breast for lumps. Have you ever had a clinical breast exam?

How long has it been since your last breast exam?

Cervical Cancer Screening

Cervical cancer screening has helped reduce the number of deaths from cervical cancer by 70%.[40] Current guidelines for cervical cancer screening recommend that Pap testing should begin within three years after the onset of sexual intercourse, or at least by 21 years of age. Once three or more annual tests have been normal, at the discretion of the physician, Pap tests can be performed less frequently, but at least once every three years.[41-45]

One Healthy People 2010 objective is to increase the prevalence of women aged 18 years and older who received a Pap test within the preceding three years to 90%.[40] In 2004, 82.6% of Michigan women aged 18 years and older had a Pap test within the previous three years. This estimate increased with age from 84.2% of those aged 18-29 years of age to 91.4% of those aged 30-39 years and then declined to 64.6% of those aged 70 years and older. This proportion also increased with education level. The proportion of Michigan women aged 18 years and older who have received a Pap test in the past three years has remained consistent with the U.S. median in the past ten years (Fig. 14).

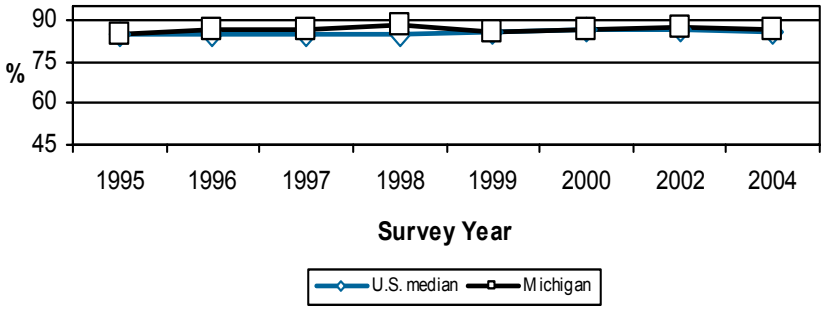
Another Healthy People 2010 objective is to increase the proportion of women aged 18 years and older who have ever received a Pap test to 97%.[40] In 2004, an estimated 94.8% (93.5-95.8) of Michigan women aged 18 years and older reported ever having a Pap test. This proportion increased with age from 85.1% (79.7-89.2) of those aged 18-29 years to 98.7% (97.1-99.5) of those aged 50-59 years and then declined to 94.5% (92.1-96.2) of those aged 70 years and older. This proportion increased with education level from 89.3% (83.1-93.5) of those who did not graduate high school to 97.4% (95.6-98.4) of those who were college graduates.

Cervical Cancer Screening
2004 Michigan BRFS

Demographic Characteristics	Had Appropriately Timed Pap Test[a]	
	%	95% Confidence Interval
Total	**82.6**	**(81.0 - 84.1)**
Age		
18 - 29	84.2	(78.7 - 88.4)
30 - 39	91.4	(88.3 - 93.8)
40 - 49	87.7	(84.4 - 90.3)
50 - 59	82.5	(78.7 - 85.7)
60 - 69	77.2	(72.6 - 81.3)
70 +	64.6	(60.1 - 68.9)
Race		
White	82.8	(81.1 - 84.4)
Black	84.8	(79.2 - 89.1)
Education		
< High school	75.1	(68.2 - 81.0)
High school grad	76.5	(73.1 - 79.5)
Some college	85.4	(82.6 - 87.9)
College grad	89.0	(86.5 - 91.0)
Household Income		
< $20,000	69.6	(64.6 - 74.2)
$20,000 - $34,999	80.4	(76.8 - 83.6)
$35,000 - $49,999	87.0	(82.8 - 90.2)
$50,000 - $74,999	90.1	(86.6 - 92.7)
≥ $75,000	89.1	(85.5 - 92.0)

Note: Data included diagnostic tests.
[a] Among women aged 18 years and older, the proportion who had a Pap test within the previous three years.

Figure 14: Had a Pap Test in the Past Three Years Among Women Aged 18 Years and Older U.S. vs. Michigan, 1995-2004



A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?

How long has it been since you had your last Pap test?

Prostate Cancer Screening

Prostate cancer is the second leading cause of cancer deaths among males in Michigan; there were 985 deaths in 2003 (25.5 deaths per 100,000 male population, age adjusted).[38, 46] The American Cancer Society recommends that health care professionals should offer the digital rectal exam (DRE) and prostate-specific antigen (PSA) blood test screenings to men at aged 50 and older who have at least a 10-year life expectancy. Men who have an increased risk for prostate cancer should begin testing earlier.[47] Some of the risk factors that are associated with prostate cancer, other than age, include race, nationality, family history, and diet.[48] Screening can detect the disease in its early stages, but it is still undetermined whether screening improves health outcomes.[49-50]

In 2004, it was estimated that 53.6% of Michigan men aged 50 years and older had a DRE in the past year, and 56.8% had a PSA test in the past year. It was estimated that 7.8% (6.1-9.9) of men aged 50 years and older in Michigan had been diagnosed with prostate cancer. These men were excluded from the screening estimate.

A higher proportion of men aged 60-69 years had a DRE in the past year compared with men aged 50-59 years (61.4% vs. 49.2%). A higher proportion of men aged 60-69 had a PSA test in the past year (66.1%) compared with those aged 50-59 years (49.2%) and those aged 70 years and older (61.0%). Men at a higher education level were more likely to have had a DRE in the past year than those at a lower education level (58.4% vs. 46.4%) and men at a higher income level were more likely to have had a PSA test than those at a lower income level (61.5% vs. 47.7%).

Figures 15 and 16 show the trend in prostate cancer screening since 2001.

Prostate Cancer Screening
Among Men Aged 50 Years and Older
2004 Michigan BRFS

Demographic Characteristics	Had DRE in Past Year[a]		Had PSA Test in Past Year[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**53.6**	**(50.0 - 57.2)**	**56.8**	**(53.0 - 60.4)**
Age				
50 - 59	49.2	(43.6 - 54.8)	49.2	(43.6 - 54.9)
60 - 69	61.4	(55.1 - 67.4)	66.1	(59.8 - 71.9)
70 +	53.2	(46.4 - 59.9)	61.0	(54.0 - 57.6)
Race				
White	55.0	(51.2 - 58.7)	58.1	(54.2 - 61.8)
Black	46.5	(32.6 - 60.9)	51.5	(36.8 - 65.9)
Education				
≤ High school grad	46.4	(40.6 - 52.2)	52.0	(46.1 - 57.9)
≥ Some college	58.4	(53.7 - 63.0)	59.9	(55.1 - 64.5)
Household Income				
< $35,000	48.7	(42.5 - 54.9)	47.7	(51.5 - 53.9)
≥ $35,000	57.6	(52.7 - 62.3)	61.5	(56.5 - 66.2)

Note: Men who had been diagnosed with prostate cancer (7.8% [CI 6.1 - 9.9]) were excluded.
Among men aged 50 years and older, the proportion who reported…
[a] having a digital rectal exam in the past year.
[b] having a PSA test in the past year.

Figure 15: Had a PSA Test in the Past Year
Among Men Aged 50 Years and Older
Michigan, 2001-2004

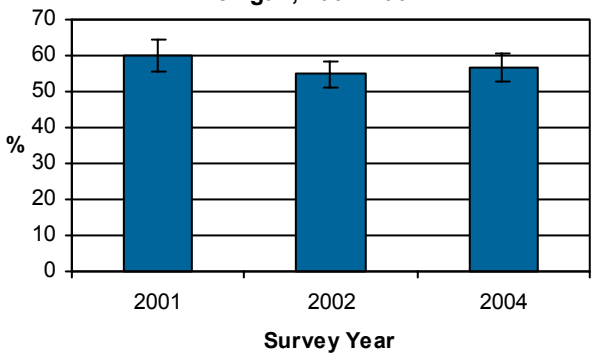
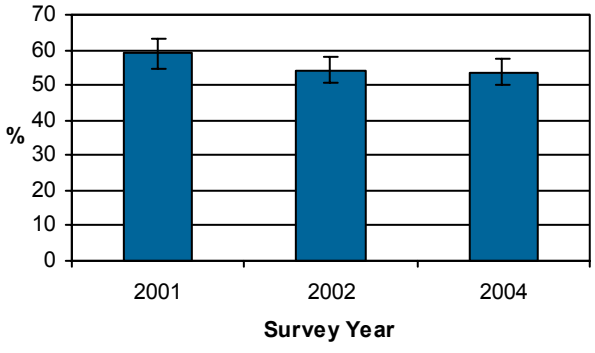


Figure 16: Had a DRE in the Past Year
Among Men Aged 50 Years and Older
Michigan, 2001-2004



Colorectal Cancer Screening

In 2003, colorectal cancer was the third leading cause of cancer-related deaths in Michigan and the second leading cause in the United States with 1,916[51] and 55,616[52] deaths, respectively. Fecal occult blood tests, sigmoidoscopy, and colonoscopy are screening procedures that are performed to detect colorectal cancer in the early stages. In the United States Preventive Services Task Force review of research literature, they have found evidence that periodic fecal occult blood testing (FOBT) and sigmoidoscopy reduces mortality from colorectal cancer; colonoscopy has not been studied adequately yet.[53-54]

One Healthy People 2010 objective is to increase the proportion of adults aged 50 years and older who have received a fecal occult blood test within the preceding two years to 33%.[55] An estimated 30.4% of Michigan adults aged 50 years and older had a blood stool test in the past two years. Nearly half (50.4%) of all Michigan adults aged 50 years and older had a sigmoidoscopy or colonoscopy in the past five years. These proportions increased with age. Men were more likely than women to have had a sigmoidoscopy or colonoscopy in the past five years (52.9% vs. 48.3%).

Figure 17 shows the current trends in the use of colorectal cancer screening. The percentage of those using a blood stool test in the past two years decreased between 2002 (35.1% [32.9-37.4]) and 2004 by 4.7 percentage points, while the percentage of those having a sigmoidoscopy or colonoscopy in the past five years increased between 2002 (45.2% [42.9-47.6]) and 2004 by 5.2 percentage points.

Colorectal Cancer Screening
Among Adults Aged 50 Years and Older
2004 Michigan BRFS

Demographic Characteristics	Had Blood Stool Test in Past Two Years[a]		Had Sigmoidoscopy or Colonoscopy in Past Five Years[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**30.4**	**(28.4 - 32.5)**	**50.4**	**(48.2 - 52.6)**
Age				
50 - 59	23.8	(20.9 - 27.1)	39.9	(36.5 - 43.5)
60 - 69	34.5	(30.7 - 38.5)	58.4	(54.4 - 62.3)
70 +	35.9	(32.4 - 39.6)	57.9	(54.1 - 61.5)
Gender				
Male	30.8	(27.6 - 34.2)	52.9	(49.3 - 56.3)
Female	30.0	(27.6 - 32.6)	48.3	(45.5 - 51.1)
Race				
White	31.2	(29.2 - 33.4)	50.9	(48.6 - 53.1)
Black	23.7	(17.0 - 32.0)	50.3	(41.7 - 58.9)
Education				
< High school	28.9	(22.7 - 36.0)	42.3	(35.6 - 49.3)
High school grad	28.5	(25.3 - 32.0)	49.8	(46.0 - 53.5)
Some college	34.5	(30.5 - 38.7)	49.6	(45.3 - 54.0)
College grad	29.2	(25.7 - 33.0)	54.4	(50.4 - 58.4)
Household Income				
< $20,000	30.1	(25.2 - 35.4)	45.0	(39.7 - 50.4)
$20,000 - $34,999	25.9	(22.3 - 30.0)	49.2	(44.7 - 53.7)
$35,000 - $49,999	31.9	(26.7 - 37.6)	49.8	(43.9 - 55.7)
$50,000 - $74,999	30.6	(25.4 - 36.5)	55.9	(49.9 - 61.8)
≥ $75,000	31.3	(26.3 - 36.6)	50.9	(45.4 - 56.3)

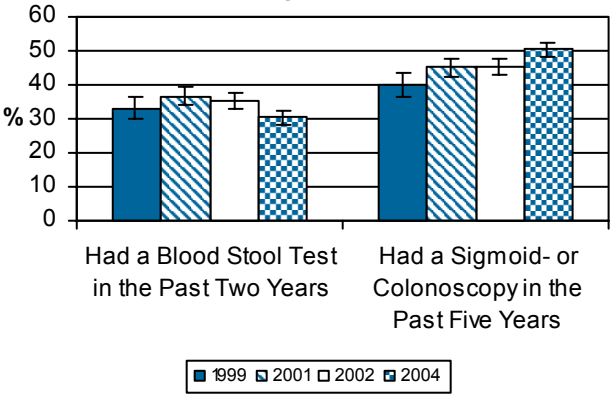
Among those aged 50 years and older, the proportion who…
[a] had a blood stool test within the past two years using a home kit.
[b] had a sigmoidoscopy or colonoscopy with the past five years.

Risk factors associated with colorectal cancer include having a family history, ethnic background, age, diet from animal sources, physical inactivity, diabetes, smoking, and alcohol intake.[56]

Those who were active in their leisure time in 2004 were more likely to have had a sigmoidoscopy or colonoscopy in the previous five years than those who were inactive in their leisure time (52.2% [49.7-54.8] vs. 44.8% [40.5-49.2]).

Current smokers (34.9% [29.7-40.5]) were less likely than those who were former smokers (55.4% [51.8-58.9]) or never smokers (51.5% [48.3-54.7]) to have had a sigmoidoscopy or colonoscopy in the past five years, and were also less likely to have had a blood stool test in the past two years (20.3% [15.9-25.5], 32.9% [29.6-36.4], 31.8% [28.9-34.9] respectively).

Figure 17: Colorectal Cancer Screening
Among Adults Aged 50 Years and Older
Michigan, 1999-2004



Excess Sun Exposure

Sunburns and suntans, through excess exposure to UV light without protection, can increase the risk of skin cancer.[57] In Michigan, the risk of getting melanoma was 17.6 per 100,000 population in 2002,[58] and the mortality rate was 2.4 per 100,000 population.[59] Although melanoma and other types of skin cancer are preventable through reducing the number of burns and tans by regularly using sunscreen, protective clothing, or limiting sun exposure during peak times of the day, many people still do not follow these recommendations.[57, 60-61]

In 2004, an estimated 38.3% of Michigan adults had at least one sunburn in the past year. This proportion decreased with age from 53.8% of those aged 18-24 years to 5.8% of those aged 75 years and older. Men were more likely than women (43.8% vs. 33.2%), and whites were more than eight times as likely as blacks to have had a sunburn (44.1% vs. 5.7%). This proportion increased with education and income levels. Among those who had a sunburn in the past year, the median number of sunburns in the previous year was 1.6.

Those who engaged in at least some physical activity during their leisure time in 2004 were more likely to have had at least one sunburn in the previous year than those who were not physically active (41.9% [40.0-43.7] vs. 25.7% [22.6-29.0]).

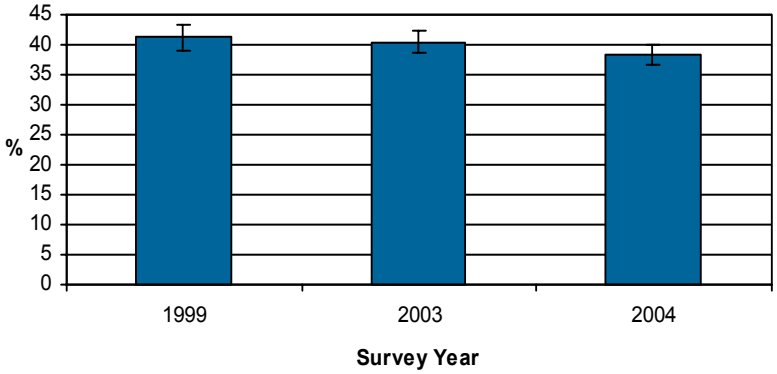
Since 1999, the prevalence of Michigan adults who had at least one sunburn in the past year decreased by 2.9 percentage points (Fig. 18).

Excess Sun Exposure
2004 Michigan BRFS

Demographic Characteristics	Had a Sunburn in Past Year[a]	
	%	95% Confidence Interval
Total	**38.3**	**(36.6 - 39.9)**
Age		
18 - 24	53.8	(47.6 - 59.8)
25 - 34	50.1	(45.6 - 54.7)
35 - 44	48.2	(44.6 - 51.7)
45 - 54	40.7	(37.4 - 44.0)
55 - 64	24.6	(21.6 - 28.0)
65 - 74	14.3	(11.6 - 17.4)
75 +	5.8	(4.1 - 8.2)
Gender		
Male	43.8	(41.2 - 46.4)
Female	33.2	(31.3 - 35.2)
Race		
White	44.1	(42.3 - 45.9)
Black	5.7	(3.5 - 9.1)
Education		
< High school	25.8	(20.4 - 32.0)
High school grad	35.1	(32.2 - 38.0)
Some college	40.8	(37.8 - 43.9)
College grad	43.3	(40.4 - 46.1)
Household Income		
< $20,000	22.1	(18.4 - 26.3)
$20,000 - $34,999	31.4	(28.0 - 35.1)
$35,000 - $49,999	40.9	(36.8 - 45.2)
$50,000 - $74,999	47.5	(43.6 - 51.5)
≥ $75,000	49.9	(46.4 - 53.4)

[a] The proportion who had at least one sunburn during the past 12 months.

Figure 18: Had a Sunburn in the Past Year
Michigan, 1999-2004



Have you had a sunburn within the past 12 months?

Including times when even a small part of your skin was red for more than 12 hours, how many sunburns have you had within the past 12 months?

Disability

One Healthy People 2010 goal is to "promote the health of people with disabilities, prevent secondary conditions, and eliminate disparities between people with and without disabilities in the U.S. population."[62] There is a myriad of definitions for disability, ranging from experiencing difficulty in participating in certain activities (such as lifting and carrying objects, seeing, hearing, talking, walking or climbing stairs) to having more severe disabilities that require assistance in personal care needs (i.e., bathing) or routine care needs (i.e. housework).[63] Disability in the MI BRFSS is defined as either being limited in any activities because of physical, mental, or emotional problems, or having any health problems that required them to use special equipment (such as a cane, a wheelchair, a special bed, or a special telephone).

An estimated 21.3% of Michigan adults were living with a disability in 2004. The proportion who had a disability increased with age from 10.0% of those aged 18-24 years to 43.6% of those aged 75 years or older. The proportion of adults who had a disability declined with education level. The estimated proportion of Michigan adults who were limited in any activities was 19.8% (18.5-21.1), and the proportion who used special equipment due to a health problem was 6.5% (5.8-7.2). An estimated 76.0% (70.9-80.4) of those who used special equipment due to a health problem reported being limited in any activities.

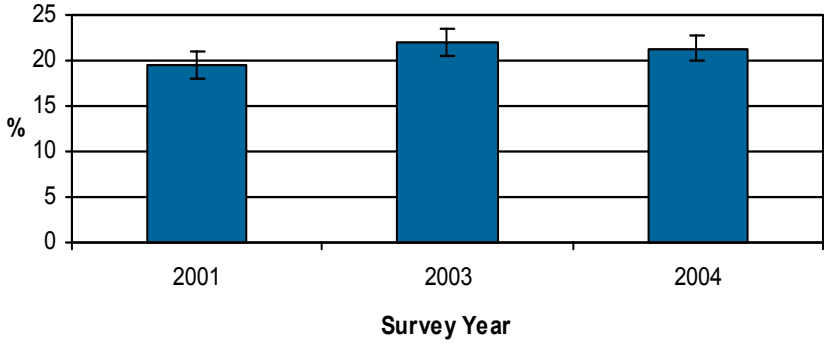
The prevalence of disability in Michigan has increased from 19.5% (18.1-20.9) in 2001 to 21.3% in 2004 (Fig. 19).

Disability
2004 Michigan BRFS

Demographic Characteristics	Disability[a]	
	%	95% Confidence Interval
Total	**21.3**	**(20.1 - 22.7)**
Age		
18 - 24	10.0	(6.8 - 14.5)
25 - 34	12.5	(9.6 - 16.1)
35 - 44	16.3	(13.9 - 19.1)
45 - 54	23.1	(20.4 - 26.1)
55 - 64	29.6	(26.3 - 33.2)
65 - 74	29.9	(26.2 - 33.8)
75 +	43.6	(39.0 - 48.2)
Gender		
Male	20.1	(18.1 - 22.2)
Female	22.5	(20.9 - 24.2)
Race		
White	21.1	(19.8 - 22.5)
Black	21.0	(16.9 - 25.8)
Education		
< High school	31.3	(26.1 - 37.1)
High school grad	24.7	(22.3 - 27.3)
Some college	20.3	(19.1 - 22.7)
College grad	15.9	(14.1 - 18.0)
Household Income		
< $20,000	39.5	(35.3 - 43.8)
$20,000 - $34,999	23.6	(20.7 - 26.7)
$35,000 - $49,999	14.9	(12.4 - 17.9)
$50,000 - $74,999	17.3	(14.5 - 20.5)
≥ $75,000	12.6	(10.5 - 15.0)

[a] The proportion who reported being limited in any activities because of physical, mental, or emotional problems, or reported that they required use of special equipment (such as a cane, a wheelchair, a special bed, or a special telephone) due to a health problem.

Figure 19: Disability
Michigan, 2001-2004



A secondary condition is a preventable condition that is related to a person's disability, e.g., accessibility issues, pressure sores, chronic pain, mobility problems, and depression.

In 2004, Michigan adults with disabilities were more likely than those who did not to have 14 or more days of physical health that was not good (47.8% [43.8-51.8] vs. 6.1% [5.1-7.2]), mental health that was not good (20.5% [17.9-23.4] vs. 8.4% [7.4-9.5]), and activity limitation (23.5% [20.7-26.5] vs. 2.3% [1.8-2.9]).

Adults with disabilities were more than twice as likely as those without to have not participated in any leisure-time physical activity in the past month (37.5% [34.3-40.8] vs. 17.9% [16.5-19.4]).

Oral Health

Oral health is an important part to one's general health and quality of life. Regular dental care provides preventive dental services such as teeth cleaning, and permits early diagnosis and treatment of tooth decay and periodontal diseases.[64] It has been estimated that poor adults aged 18 years and older are three times more likely to have at least one untreated decayed tooth compared with non-poor adults (33% vs. 11%).[65]

An estimated 24.0% of Michigan adults did not visit the dentist in the past year. Men were more likely than women (26.3% vs. 21.9%) and blacks were more likely than whites (29.6% vs. 22.4%) to have not seen the dentist in the past year. This proportion declined with education and income levels.

Tooth loss is the result of disease or injury.[64] In 2004, 58.1% (56.5-59.7) of Michigan adults had not ever had any permanent teeth removed because of tooth decay or gum disease. An estimated 5.0% (4.4-5.6) had had all their permanent teeth removed.

Since 1999, Michigan has had a relatively consistent prevalence of those who had not visited a dentist in the past year (Fig. 20).

Dental Visits
2004 Michigan BRFS

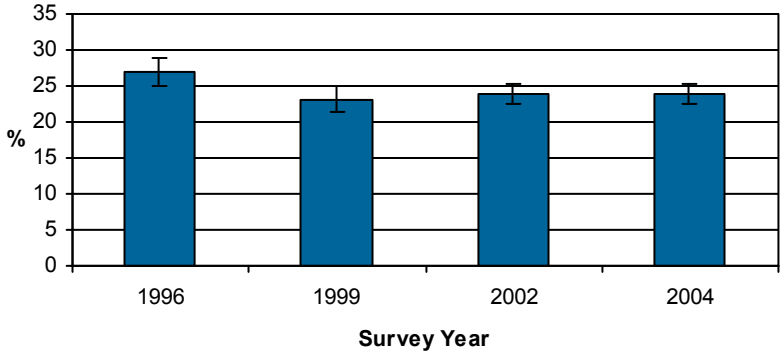
Demographic Characteristics	No Dental Visit in Past Year[a]	
	%	95% Confidence Interval
Total	**24.0**	**(22.5 - 25.4)**
Age		
18 - 24	25.7	(20.7 - 31.5)
25 - 34	29.6	(25.6 - 34.0)
35 - 44	20.8	(18.0 - 24.0)
45 - 54	22.9	(20.0 - 26.0)
55 - 64	20.2	(17.4 - 23.4)
65 - 74	24.0	(20.6 - 27.9)
75 +	25.9	(22.1 - 30.0)
Gender		
Male	26.3	(24.0 - 28.7)
Female	21.9	(20.2 - 23.6)
Race		
White	22.4	(20.9 - 23.9)
Black	29.6	(24.8 - 34.9)
Education		
< High school	44.3	(38.3 - 50.4)
High school grad	30.1	(27.4 - 32.9)
Some college	23.7	(21.1 - 26.5)
College grad	11.8	(10.0 - 13.9)
Household Income		
< $20,000	48.6	(44.2 - 53.0)
$20,000 - $34,999	32.5	(29.1 - 36.2)
$35,000 - $49,999	19.9	(16.6 - 23.6)
$50,000 - $74,999	17.8	(14.7 - 21.4)
≥ $75,000	10.4	(8.3 - 12.9)

[a] The proportion who reported that they had not visited a dentist or dental clinic for any reason in the previous year.

Periodontal disease is associated with certain chronic conditions, such as diabetes, cardiovascular disease, and stroke.[64] One Healthy People 2010 objective is to increase the proportion of persons with diabetes who have had at least an annual dentist examination.[66] However, in 2004, those who had diabetes were more likely to have not visited the dentist in the past year compared with those without diabetes (32.5% [27.8-37.6] vs. 23.3% [21.8-24.8]). Among those who had diabetes, 15.1% (11.8-19.2) were estimated to be missing all their teeth compared to 4.2% (3.6-4.8) of those who did not have diabetes.

Tobacco use is one of the greatest preventable risk factors for oral cancer.[64] In 2003, oral cancer accounted for 257 deaths in Michigan and 7,712 deaths in the United States.[38, 52] Current smokers were more likely than former smokers and never smokers to have not seen the dentist in the past year (33.8% [30.4-37.4], 24.1% [21.5-26.9], 19.4% [17.6-21.4]). Smokers (5.7% [4.5-7.3]) and former smokers (8.3% [6.9-9.9]) were more likely than never smokers (3.1% [2.5-3.8]) to have all their teeth missing.

Figure 20: No Dental Visit in Past Year
Michigan, 1996-2004



Adult Immunizations

Adult immunizations against influenza and pneumococcal disease are important health indicators that need to be routinely monitored since morbidity and mortality are associated with both of these diseases among different demographic groups.[67-68] Influenza and pneumonia were the 6th leading cause of death in 2003 among adults 65 years and older in the United States, attributing to nearly 57,500 deaths.[52] A Healthy People objective is to ensure that 90% of adults aged 65 years and older are vaccinated annually against influenza and ever vaccinated against pneumococcal disease by 2010.[68]

Results from the 2004 MI BRFS indicate that two-thirds (66.6%) of Michigan adults aged 65 years and older were immunized against influenza in the past year, and 59.4% had ever received a pneumococcal vaccination in 2004. Compared to 1995, the prevalence of immunization in Michigan among adults 65 years and older had increased 18.1% (from 56.4% to 66.6%) for influenza and 49.6% (from 39.7% to 59.4%) for pneumococcal disease (Figs. 21 and 22).

Another Healthy People 2010 objective is to increase the vaccination rate to 60% among those aged 18-64 years who have chronic health conditions.[68] Morbidity and mortality related to influenza and pneumoccocal disease is higher among those who have diabetes,[52, 69-71] and it is also recommended that people who have asthma should get the influenza vaccination annually.[70]

Among those aged 18-64 years, an estimated 43.7% (37.1-50.5) of those who had diabetes had an influenza vaccination in the past year compared with 23.2% (21.7-24.8) of those who did not have diabetes. An estimated 41.1% (34.3-48.3) of those who had diabetes had a pneumococcal shot compared to 14.2% (12.8-15.7) of those who did not have diabetes. Also among this age group, those who had current asthma were more likely to have had an influenza vaccination than those who did not have asthma (33.5% [27.9-39.7] vs. 23.5% [21.9-25.1]).

Immunizations Among Adults Aged 65 Years and Older
2004 Michigan BRFS

Demographic Characteristics	Had Flu Shot in Past Year[a]		Ever Had Pneumonia Vaccine[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**66.6**	**(63.6 - 69.5)**	**59.4**	**(56.1 - 62.5)**
Age				
65 - 74	61.4	(57.1 - 65.4)	52.8	(48.5 - 57.1)
75 +	71.8	(67.4 - 75.8)	65.8	(61.1 - 70.2)
Gender				
Male	63.2	(58.1 - 68.0)	51.5	(46.3 - 56.7)
Female	69.0	(65.2 - 72.5)	64.8	(60.8 - 68.6)
Race				
White	69.5	(66.4 - 72.3)	62.5	(59.3 - 65.7)
Black	40.4	(46.4 - 71.6)	33.0	(21.7 - 46.6)
Education				
< High school	62.4	(54.3 - 69.9)	53.6	(45.3 - 61.8)
High school grad	67.9	(62.9 - 72.4)	63.0	(57.9 - 67.9)
Some college	67.8	(61.4 - 73.6)	61.7	(55.1 - 68.0)
College grad	66.6	(60.3 - 72.4)	55.8	(49.0 - 62.3)
Household Income				
< $20,000	66.5	(60.1 - 72.4)	60.0	(53.2 - 66.4)
$20,000 - $34,999	63.4	(57.6 - 68.7)	58.9	(53.1 - 64.5)
$35,000 - $49,999	64.1	(55.2 - 72.2)	54.1	(44.8 - 63.1)
≥ $50,000	66.5	(57.9 - 74.1)	53.8	(45.0 - 62.3)

[a] Among those aged 65 years and older, the proportion who reported that they had a flu shot during the past 12 months.
[b] Among those aged 65 years and older, the proportion who reported that they ever had a pneumococcal vaccine.

Figure 21: Had a Flu Shot in Past Year Among Adults Aged 65+ Years U.S. vs. Michigan, 1995-2004

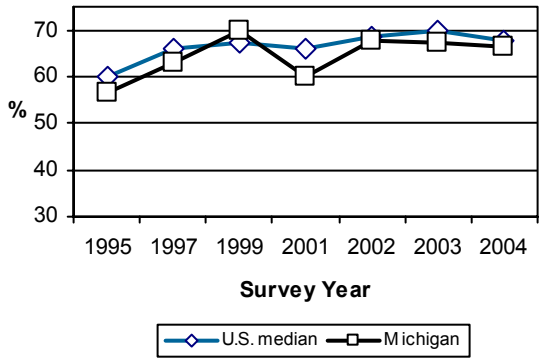
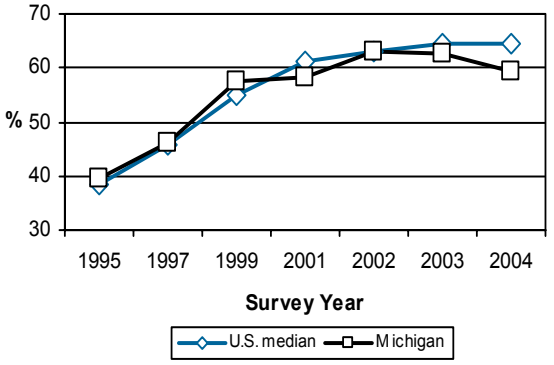


Figure 22: Ever Had a Pneumococcal Vaccination Among Adults Aged 65+ Years U.S. vs. Michigan, 1995-2004



HIV Testing

It is estimated that 16,200 people are living with HIV/AIDS in Michigan, 4,500 of whom do not know that they are infected.[72] Early awareness of an HIV infection through HIV testing can prevent further spread of the disease, and an early start on antiretroviral therapy can increase the quality of life among those who are living with HIV/AIDS.[73-74]

An estimated 40.3% of Michigan adults aged 18-64 years had ever been tested for HIV, apart from blood donations. The prevalence of HIV testing decreased in age from 58.2% among those aged 25-34 years to 18.8% among those aged 55-64 years. Women were more likely than men (44.0% vs. 36.4%) and blacks were more likely than whites to have ever been tested (56.4% vs. 37.0%). This proportion declined with income level.

Since 2000, the prevalence of HIV testing in Michigan among adults aged 18-64 years has decreased 16.9% (from 48.5% to 40.3%) (Fig. 23).

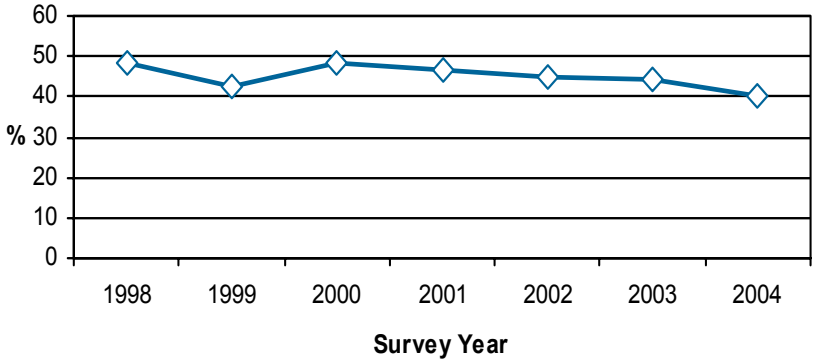
One quarter of Michigan adults (25.3% [22.7-28.0]) reported that they had their last HIV test as a part of a routine medical check-up in 2004. The most frequently reported places where Michigan adults reported having their last HIV test were at a private doctor or HMO (43.7% [40.7-46.7]), at a clinic (22.2% [19.8-25.1]), and at a hospital (18.4% [16.2-20.8]).

HIV Testing
Among Adults Aged 18 - 64 Years
2004 Michigan BRFS

Demographic Characteristics	Ever Had an HIV Test[a]	
	%	95% Confidence Interval
Total	**40.3**	**(38.4 - 42.1)**
Age		
18 - 24	37.2	(31.5 - 43.3)
25 - 34	58.2	(53.6 - 62.6)
35 - 44	49.0	(45.4 - 52.5)
45 - 54	32.0	(28.9 - 35.3)
55 - 64	18.8	(16.0 - 21.9)
Gender		
Male	36.4	(33.6 - 39.3)
Female	44.0	(41.6 - 46.4)
Race		
White	37.0	(35.1 - 39.0)
Black	56.4	(50.3 - 62.3)
Education		
< High school	41.2	(33.5 - 49.4)
High school grad	37.6	(34.3 - 41.1)
Some college	45.4	(42.0 - 48.9)
College grad	37.8	(34.8 - 40.8)
Household Income		
< $20,000	48.9	(43.3 - 54.5)
$20,000 - $34,999	44.1	(39.5 - 48.7)
$35,000 - $49,999	41.1	(36.4 - 45.8)
$50,000 - $74,999	39.7	(35.6 - 43.9)
≥ $75,000	38.8	(35.4 - 42.4)

Note: 'Don't know' was considered a valid response (2.9% [CI 2.3-3.5]).
[a] Among those aged 18-64 years of age, the proportion who reported that they ever had been tested for HIV, apart from tests that were part of a blood donation.

Figure 23: Ever Tested for HIV Among Adults Aged 18-64 Years
Michigan, 1998-2004



It was also estimated from the 2004 MI BRFS that 3.7% (3.0-4.6) of Michigan adults aged 18-64 years engaged in at-risk behaviors for acquiring HIV in the past year. At-risk behaviors included having used intravenous drugs, been treated for a sexually transmitted or venereal disease, given or received money or drugs in exchange for sex, and had anal sex without a condom. This proportion decreased from 9.5% (6.5-13.7) of those aged 18-24 years to 0.6% (0.2-1.5) of those aged 55-64 years. This proportion declined with education and income levels.

Firearms

Nineteen percent (18.8%) of all injury deaths in the United States were caused by firearms, second only to motor-vehicle traffic accidents (27.3%) in 2002.[75] In Michigan, 10.8 firearm-related deaths occurred per 100,000 population (three-year age-adjusted rate, 2000-2002).[76]

An estimated 59.3% of Michigan adults reported that they did not have a gun in their home in 2004. This proportion decreased with age from 67.9% of those aged 18-24 years to 51.1% of those aged 45-54 years and then increased to 66.4% among those aged 75 years and older. Women were more likely than men (68.2% vs. 49.4%) and blacks were more likely than whites (77.8% vs. 55.8%) to not have a gun in the home.

According to the 2004 MI BRFS, 3.2% of adults reported having a loaded, unlocked gun in their home in Michigan, and men were more likely than women to report this (4.9% vs. 1.6%). An estimated 2.0% (1.3-3.0) of Michigan adults who had children under the age of 18 years in the household had a loaded, unlocked gun in the home.

The proportions who did not have a gun and who had a loaded, unlocked gun in the home were similar between 2002 and 2004 (Figs. 24 and 25).

Firearms in the Home

2004 Michigan BRFS

Demographic Characteristics	Have Loaded, Unlocked Gun[a]		Have No Gun[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**3.2**	**(2.6 - 3.8)**	**59.3**	**(57.6 - 60.9)**
Age				
18 - 24	1.6	(0.6 - 4.1)	67.9	(61.8 - 73.5)
25 - 34	4.5	(2.8 - 7.1)	65.9	(61.3 - 70.2)
35 - 44	2.6	(1.7 - 3.9)	58.4	(54.8 - 61.9)
45 - 54	3.0	(2.1 - 4.4)	51.1	(47.6 - 54.5)
55 - 64	4.5	(3.1 - 6.6)	51.9	(48.1 - 55.7)
65 - 74	2.9	(1.8 - 4.7)	56.6	(52.3 - 60.9)
75 +	3.2	(1.8 - 5.6)	66.4	(61.6 - 70.8)
Gender				
Male	4.9	(3.9 - 6.2)	49.4	(46.7 - 52.0)
Female	1.6	(1.2 - 2.2)	68.2	(66.3 - 70.1)
Race				
White	2.8	(2.3 - 3.4)	55.8	(54.0 - 57.6)
Black	4.3	(2.5 - 7.5)	77.8	(72.5 - 82.3)
Education				
Less than high school	3.8	(1.9 - 7.5)	64.0	(57.8 - 69.8)
High school graduate	2.5	(1.8 - 3.6)	56.0	(53.0 - 58.9)
Some college	3.5	(2.6 - 4.7)	56.8	(53.7 - 59.9)
College graduate	3.4	(2.4 - 4.8)	63.5	(60.7 - 66.3)
Household Income				
< $20,000	2.9	(1.7 - 4.9)	73.0	(68.8 - 76.8)
$20,000 - $34,999	2.4	(1.6 - 3.7)	61.7	(58.0 - 65.2)
$35,000 - $49,999	4.3	(2.9 - 6.5)	54.9	(50.6 - 59.1)
$50,000 - $74,999	3.0	(1.9 - 4.6)	50.3	(46.3 - 54.3)
$75,000 +	3.9	(2.7 - 5.6)	55.1	(51.5 - 58.6)

[a] Among all respondents, the proportion who reported having a loaded, unlocked gun in their home.
[b] Among all respondents, the proportion who reported not having a gun in their home. (1.8% [1.4-2.2] refused to answer this question and were excluded.)

Figure 24: Have No Gun
Michigan, 2002-2004

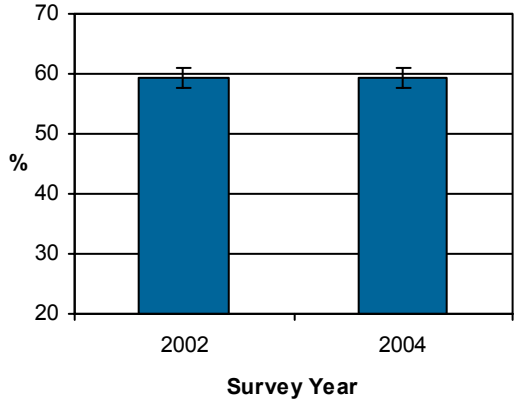
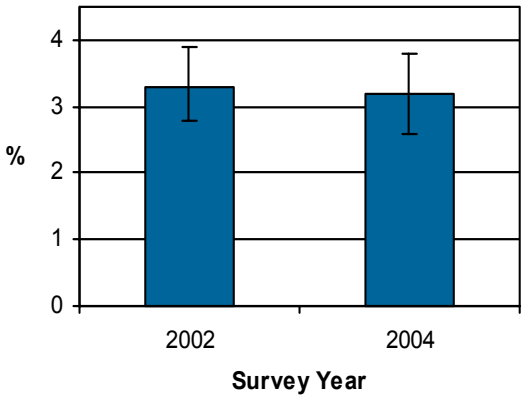


Figure 25: Have Loaded, Unlocked Gun
Michigan, 2002-2004



BRFSS Methods

The national Behavioral Risk Factor Surveillance System (BRFSS) consists of annual surveys conducted independently by the states, District of Columbia, and U.S. territories and is coordinated through a cooperative agreement with the Centers for Disease Control and Prevention (CDC). The annual Michigan surveys follow the CDC telephone survey protocol for the BRFSS and use the standardized core questionnaire. The 2004 Michigan Behavioral Risk Factor Survey (BRFS) data were collected quarterly by the Institute for Public Policy and Social Research at Michigan State University. The sample of telephone numbers was selected using a list-assisted, random-digit-dialed methodology with disproportionate stratification based on phone bank density and listedness.

The 2004 Michigan BRFS data were weighted to adjust for the probabilities of selection (based on the probability of telephone number selection, the number of adults in the household, and the number of residential phone lines) and a post-stratification weighting factor that adjusted estimates (using 2003 estimated Michigan population distributions with bridged race categories[77]) by sex, age, and race. Calculations of the prevalence estimates and confidence interval limits were performed using SUDAAN (version 9.0), a statistical computing program that was designed for analyzing data from multistage sample surveys.[78]

In previous reports, confidence intervals were presented as ± half of the width of a symmetric confidence interval (1.96 times the standard error). In this 2004 report, asymmetric confidence intervals are included, since they are now calculated by SUDAAN (v9.0). The following rule of thumb is used for interpreting the 95% confidence interval for two different subpopulations (i.e., gender, race): if the two confidence intervals do not overlap, they are probably statistically different from one another. In addition, selected pair-wise comparisons were tested for statistical significance using a t-test or chi-square. Although results of these statistical tests are not reported, they were used to guide the presentation of the results.

Unless otherwise specified, respondents who answered that they did not know or refused to answer were not included in the calculation of estimates.

For comparison purposes, the median of estimates from all participating states and territories is used as a national estimate. In 2004, 49 states, two territories, and the District of Columbia participated.

SAMPLE RESULTS

A total of 37,800 telephone numbers were used for the 2004 Michigan BRFS. The final call dispositions for the sample numbers fell into the following categories: 4,943 completed and partially completed interviews; 1,535 interviews were terminated after the respondent was selected; 1,145 eligible respondents were not able to complete interviews (i.e. selected respondent away from residence, a language problem occurred after the respondent was selected, etc.); 7,656 numbers were of unknown eligibility (i.e., a private residence answering machine, household away, etc.); and 22,520 numbers were not eligible.

The CASRO (Council of American Survey Research Organizations) response rate, which includes a portion of the dispositions with unknown eligibility in the denominator of the rate, was 48.4%. Of all contacted selected respondents, 76.7% resulted in a completed interview.

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